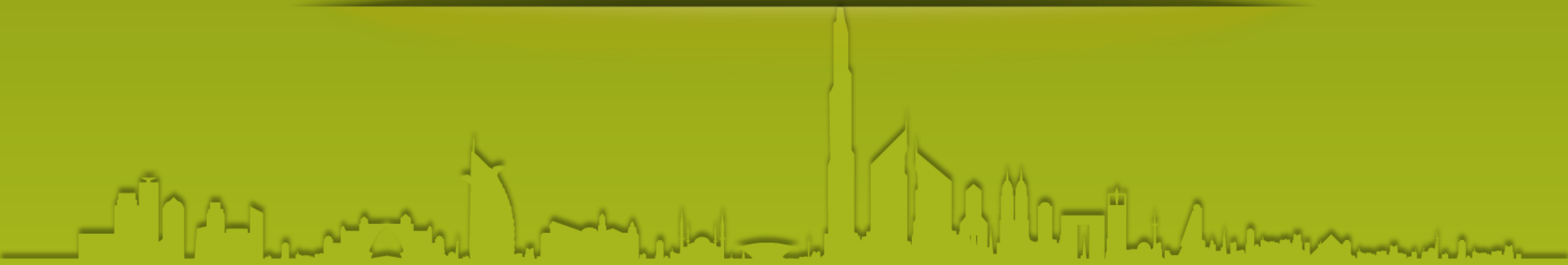




Nagham & Nawar Al Zahlawi
NFT

A look into customer sentiment and buying behaviour

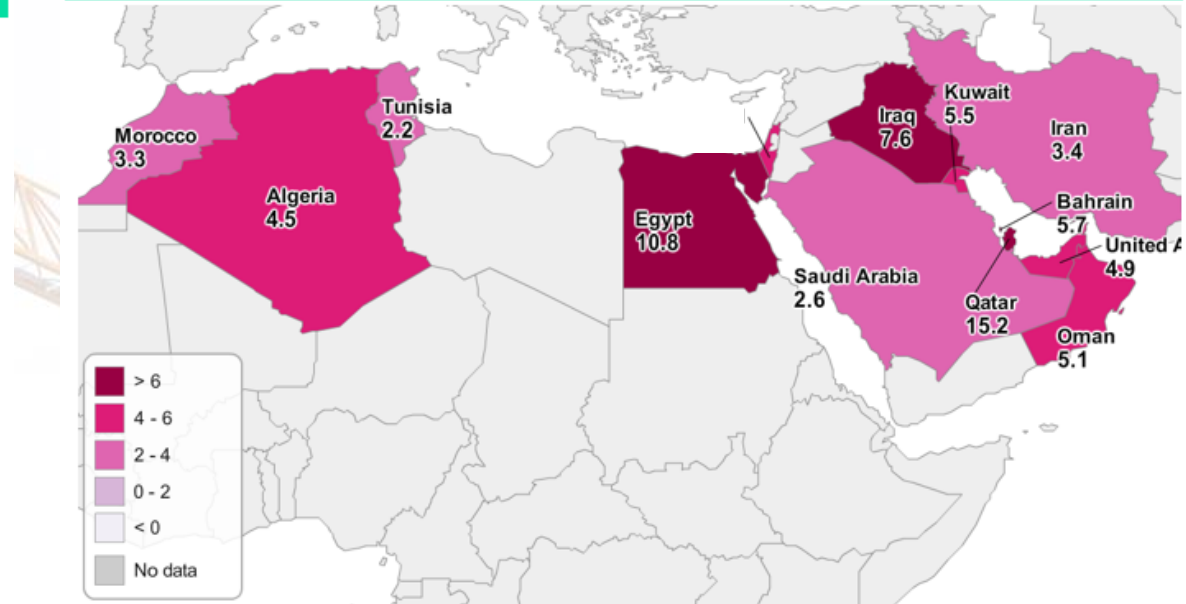


General Overview on the Construction Industry

Middle East and North Africa, Construction Output Growth (Real, % change)

	2017	2018	2019	2020	2021-2022
Qatar	20.4	15.4	15.7	15.9	14.5
Egypt	9.7	10.4	10.7	11.0	11.0
UAE	4.5	5.1	5.8	5.4	4.0
Iran	4.3	1.5	2.7	3.6	4.5
Algeria	3.3	3.9	4.2	5.2	4.6
Bahrain	1.7	5.3	6.1	6.5	5.2
Morocco	0.2	2.5	3.1	3.3	3.9
Tunisia	-1.8	-0.6	1.2	3.1	3.8
Saudi Arabia	-2.4	1.4	1.9	3.2	3.3
Kuwait	-3.4	2.0	3.5	11.9	5.2
Oman	-7.7	-6.0	9.6	9.3	6.7
Iraq	-25.0	6.5	9.5	10.0	6.0
Region	1.6	4.9	6.2	7.1	6.4

Middle East and North Africa, Construction Output Growth (Real, average % change), 2018–2022



CREATED AND ORGANISED BY

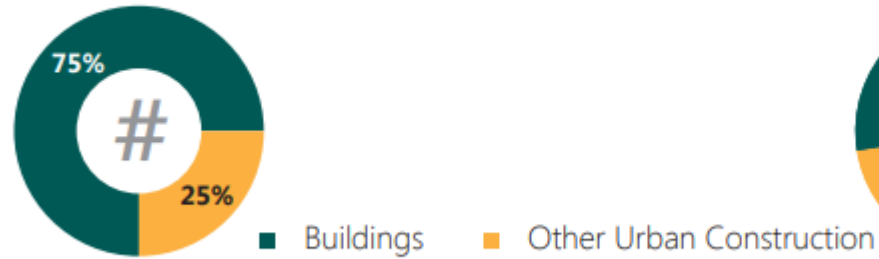


Source: Global Data@2017

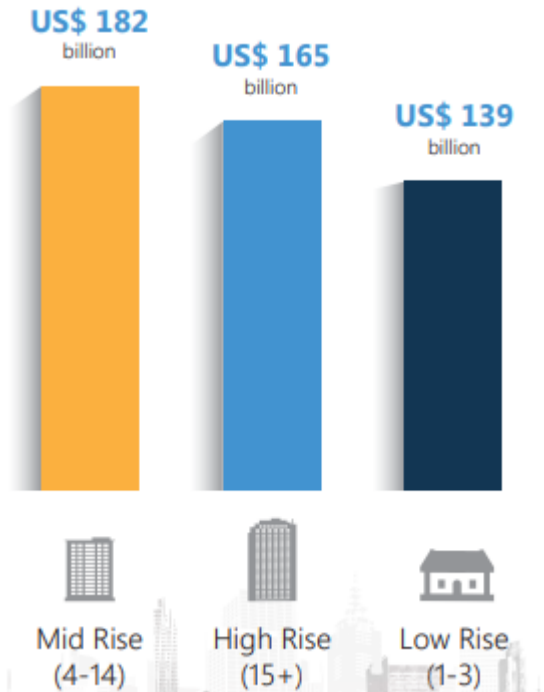
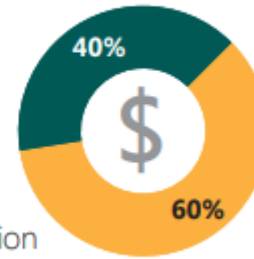


General Overview on the Construction Industry

BY NUMBER OF ONGOING PROJECTS



BY VALUE OF ONGOING PROJECTS



Customer General Sentiment About The Market

91% are optimistic and believe that the market is on a rise

9% are pessimistic and believe that there is no more growth

91% are optimistic and believe that the market is on a rise

Expo 2020

Luffing Tower Cranes



Africa & Syria

KSA construction will rise again

Within UAE, Abu Dhabi and Umm El Quwain

Kuwait

India & Asia Pacific

9% are pessimistic and believe that there is no more growth

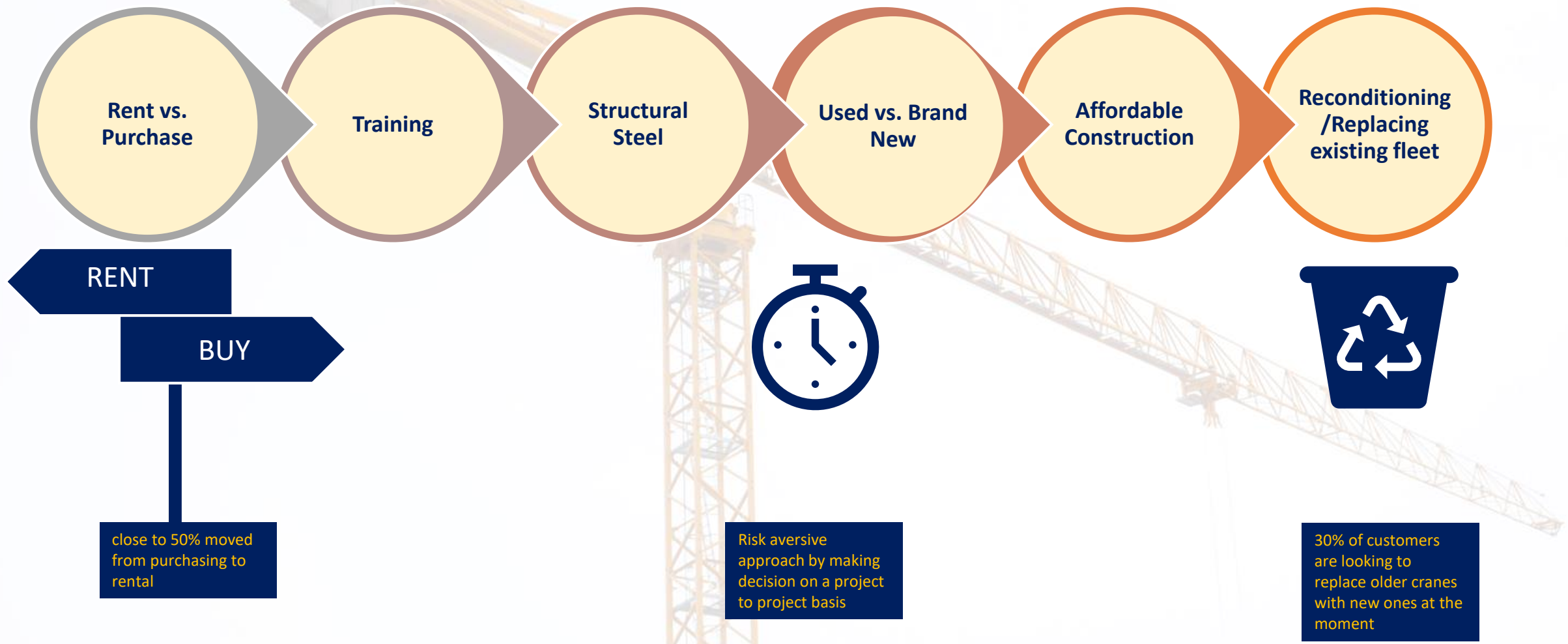
Financing, cash flow

Projects and timeline delays

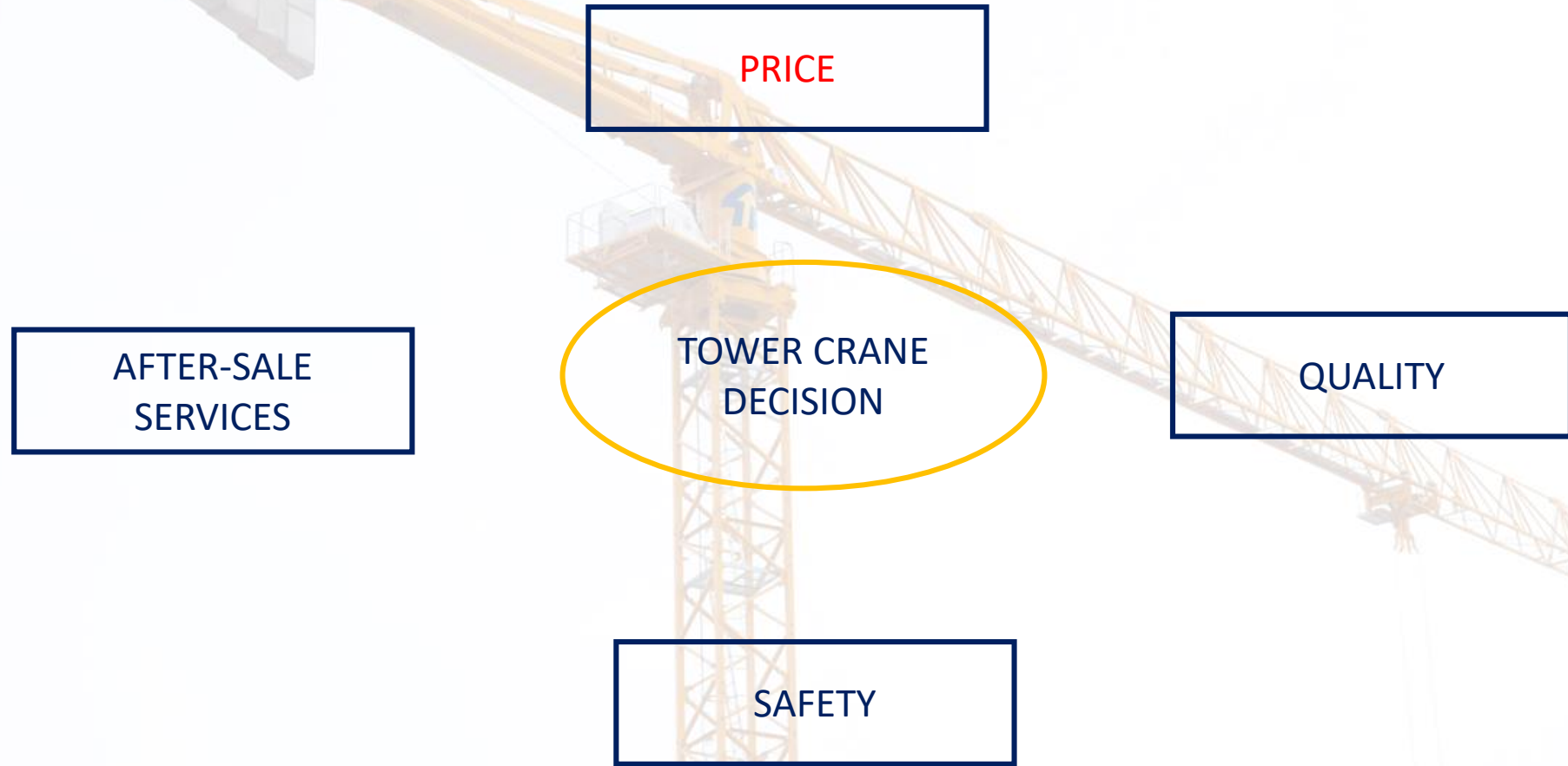
Competition is increasing and prices are squeezed

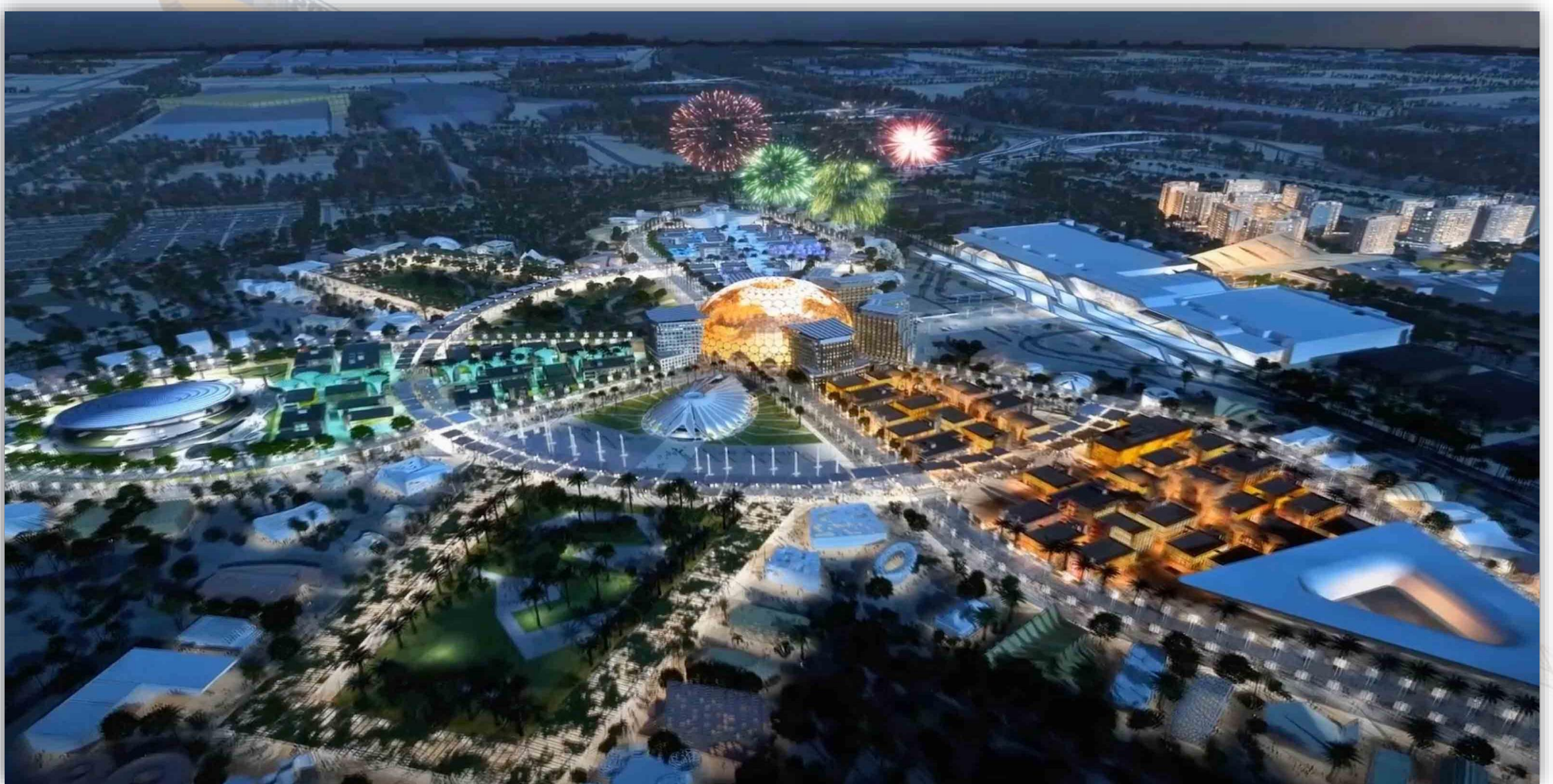
Very low profit margins

Customer Buying Behavior And Trend



Customer Buying Drivers And Factors Considered When Making Decisions





CREATED AND ORGANISED BY
**INTERNATIONAL
CRANES**
AND SPECIALIZED TRANSPORT



Photo Credit: Expo2020 - www.expo2020dubai.com

 INTERNATIONAL
**CRANES &
TRANSPORT**
MIDDLE EAST CONFERENCE

EXPO 2020 Current Statistics

243,000

meter cube of concrete poured

20,000

workers currently on site

\$2.9BN

worth of construction contracts awarded in 2017

4.38

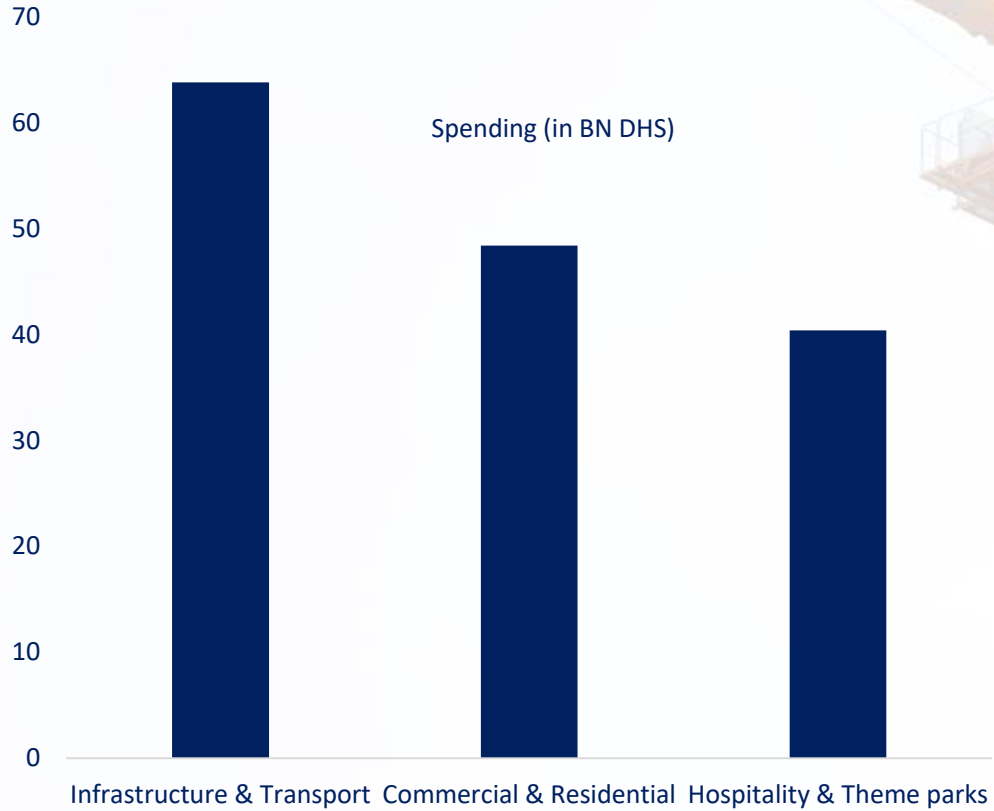
total land area of the EXPO site

45

Tower cranes on site

EXPO 2020 Current Statistics

Almost 40 per cent of the total spending on Expo 2020 is on infrastructure



EXPO 2020 Current Statistics

The total value of major Expo-related construction projects reached Dh156 billion by the end of March 31, 2018.

Top ranking projects in terms of value are:

- Al Maktoum International Airport Phase 1 tops Dh29.36 billion
- The Villages development at Dubai South with Dh25 billion
- Dubai Exhibition City with Dh24.2 billion
- Dubai Metro Red Line extension at Dh10.6 billion

Around 30% of the \$3.8 billion in construction contracts for the Expo have already been awarded, with another 60% per cent in the final procurement stage and expected to be let during 2018



CREATED AND ORGANISED BY

INTERNATIONAL
CRANES
AND SPECIALIZED TRANSPORT



Source: ConstructionWeekOnline – Issue 711
Photo Credit: NFT Specialized in Tower Cranes LLC



What happens after EXPO2020 – a move into a multi-dimensional economy

Sentiment in the UAE's construction sector is optimistic as the region prepares for Expo 2020. Diversification is the goal. Expo 2020 should galvanize the economy in the next three years, once the projects related to the global exhibition start kicking in. IHS projects UAE's non-oil growth to average 4.5 per cent between next year and 2020, partly thanks to the economic boost from the Expo.

UAE construction market will definitely grow on a faster pace because the Expo will play a major role as a driver of local entrepreneurial growth, while supporting the emirate's bid to become a regional start-up hub.

Rise in oil prices is also beneficial for contractors since regional governments are beginning to restart old projects or invest in new infrastructure development.

However, contractors are not insulated from challenges - they face smaller margins, more competition in project bids, delayed payments and rise in the cost of doing business.

There is also concern about the extent of project awards after all the Expo contracts have been let

There is a large amount of current activity but concerns remain about the volume of works after 2020.

It is best to avoid the Brazil Syndrome, where Olympic and World Cup facilities are rusting and completely abandoned.

CREATED AND ORGANISED BY

INTERNATIONAL
CRANES
AND SPECIALIZED TRANSPORT



Source: <https://edition.cnn.com/style/article/dubai-expo-2020-legacy-plan/index.html>

INTERNATIONAL
**CRANES &
TRANSPORT**
MIDDLE EAST CONFERENCE

What Happens After Expo 2020

Over 80% of Expo site will be reused. So there's no risk of a "ghost town" nowhere in sight.

- The Dubai World Trade Center Conference and Exhibition Center will relocate to the Expo site
- The District 2020 will reopen in October 2021 and become an area of its own right
- The Al Wasl Plaza will remain and will target and will have one of the world's first 5G mobile networks. It's also targeting companies working in tech and innovation. **'Connecting Minds, Creating the Future'**
- Located one metro stop away from Al Maktoum International Airport, District 2020 will also function as a new Free Trade Zone, allowing businesses to operate tax-exempt and entirely foreign-owned.



Santiago Calatrava-designed UAE National Pavilion



The Sustainability Pavilion, for instance, will live on as a center for child and scientific education

Setting New Standards After Expo 2020

- An expansive car park for 30,000 vehicles will be built by grinding thousands of recycled tyres into the asphalt mixture to prevent the rubber reaching the landfill
- Additives have been used in the concrete mix in order to reduce the consumption of water in the construction
- Dubai Municipality is helping source tires that will be used as a binding component for the asphalt
- More than 5 million cubic meters of sand has been moved but always reused
- Developers and government entities working on the site such as the Dubai World Trade Centre, Emaar, Meraas and the National Media Council have also been given guidelines to promote the use of recyclable material
- Some 370,000 tonnes, more than 85 per cent of construction waste, was diverted from the landfill in 2017. This was equivalent to 950 Emirates A380 jumbo jets
- For the entire Expo site, 50 per cent of energy will come from renewable sources such as the Sheikh Mohammed Solar Park
- The pavilion's annual production of 4 gwh/year of electricity is sufficient to power a Nissan Leaf electric car to reach half way to Mars _ a distance of 23 million kilometers
- Developers and government entities working on the site such as the Dubai World Trade Centre, Emaar, Meraas and the National Media Council have also been given guidelines to promote the use of recyclable material.



Unique Requirements for projects in Expo 2020 site

Focus on Employee welfare - EXPO2020 requirements not included in UAE Workers Welfare Minimum Standards:

- Free transportation from camp to public transportation point / local communities / surrounding facilities. Transport and vehicle safety
- Vehicles must be regularly maintained and road worthy
- Free WIFI internet facility for all residents telecom services
- Free laundry services (overalls twice a week, bed linens once a week, towels once a week) laundry services. For personal items,
- No smell or hazard to health from drainage system
- Supply of min. 5L of water per resident drinking water
- TV schedules tailored to languages of the residents leisure and general facilities
- Sports & recreation facilities (BBall courts, football / cricket pitches) and gyms will be provided leisure and general facilities
- Different choices of food taking into consideration cultural and religious backgrounds, dietary requirements will be provided. Kitchen staff to be provided with FOC laundry service
- If cooking stations provided, kitchen will be cleaned twice
- Sleeping noise level will be less than 40 dB bedroom
- All rooms to be kept clean and in good condition bedroom
- Max number of residents allowed per bedroom is eight while observing the specified space area for each resident (min. 4sqm per person)
- Accommodation must be less than one hour from EXPO 2020 site accommodation
- Worker welfare manager to be assigned and implement certain standards
- Workers Welfare Committee to be established with bi-monthly meetings and recorded M.O.M

Appendix A EX20-Specific Requirements

Worker Welfare

Note: Where sentences contain extracts from UAE Laws, these are coloured black.

Description	
Section 2	PROCUREMENT AND MANAGEMENT
Sub-section 2.1	Contractor/Subcontractor Prequalification and Tender
a	As part of the prequalification process for Expo 2020 Dubai projects and services, the proposed contractors' level of commitment to worker welfare and their ability to comply with the requirements of these standards will be assessed. Where access is provided to PMDS, a worker welfare prequalification guideline can be used.
b	An inspection of the accommodation facilities and employment conditions will be undertaken to verify the information provided by contractors and subcontractors wishing to prequalify. This inspection should take place during prequalification, but may be undertaken during the tender process.
c	Contractors/subcontractors that fail to meet the prequalification requirements may be disqualified. It is, however, possible for the contractor/subcontractor to develop and agree an improvement action plan to address the serious violations. This must be accompanied by a formal worker welfare commitment statement, signed by the contractor's most senior company representative.
d	During the tender stage bidding contractors shall submit, their updated improvement action plan (where required), a draft Worker Welfare Management Plan and in their commercial submission include a financial provision (if any) to comply with the EX20's specific requirements in Appendix A.
e	Where improvements are required, prior to award, all outstanding serious violations must be closed out. In the event the contractor/subcontractor has taken action, but is unable close out all serious violations prior to award for reasons beyond their control, evidence must be provided to substantiate the actions taken and assurance obtained that the serious violation(s) will be closed out prior to mobilisation.
Sub-section 2.2	Contractual Obligation
a	All contractors including their subcontractors entering into a contract or agreement with a client on any Expo 2020 Dubai related project must agree to abide by the minimum requirements for employment practices, accommodation and transportation as described in this standard.
b	The enforcement date for compliance with the Worker Welfare Minimum Standards will commence from the date of signature of the contract between the client and the contractor.
Sub-section 2.3	Worker Welfare Management Plan
a	A worker welfare organisation chart identifying the key personnel and their responsibilities, including Human Resources Manager, Worker Welfare Manager, the Accommodation Manager/Lodging Superintendent and any other responsible person.
b	Details of how all workers will be informed of worker welfare policies and procedures.
c	Details of the consultation process, such as the processes for consulting workers on accommodation, food, transportation, employment policies and other related matters.
d	An overview of the process by which any worker inclusive of subcontractors can raise grievances.

Unique Requirements for projects in Expo 2020 site

Focus on safety and maintenance for all equipment

- Tower cranes to be equipped with anti collision and zoning device
- Auxiliary winch to be provided on the crane
- Platform every 7 meters
- Projector + warning light
- All temporary works require design calculation. For ex. on the fixation method and wind resistance of the signboards
- Monthly maintenance checklists to be provided
- All earth moving equipment, vehicles to be equipped with AC (if closed), reverse camera.

29.9 Thorough Examination, Including Inspection and Testing

Thorough examination of all cranes, lifting equipment and accessories must be completed before first use and on a regular basis, certified at least annually by a competent person.

The user must ensure that the crane or equipment is taken out of use for the period of time required by the competent person to carry out the thorough examination. The user must also ensure that a safe system of work is in place to prevent the competent person from being exposed to danger by inadvertent operation of the crane. Where the lifting equipment is hired from a third-party, the user must ensure that thorough examinations are undertaken at required intervals. Where the user comes to an arrangement with the owner whereby the owner carries out the thorough examinations, the user must ensure they are carried out.

The Appointed Person must verify:

- Any third-party certificate and ensure it is accurate and represents the lifting equipment or accessories in question.
- The company/competent person is accredited by the relevant authority.
- The company/competent person has insurance cover.

The crane certification must consider the following:

- All crane types must be examined and certified by a competent person before first use and at regular intervals in accordance with local legislation.
- The current test/examination certificate must be verified by the supervision consultant before any crane is operated.
- The certificate must have attached a written statement from a qualified engineer confirming that the crane is built in accordance with all statutory and manufacture's requirements and that it is in good condition and suitable for its intended use.
- Webbing slings must be regularly inspected and any damaged or frayed sling must be discarded and replaced.
- A competent person must check the adequacy of the hard standing and packers under the outriggers of mobile cranes.

All lifting equipment must be fit for purpose, marked with a means of identification and safe working load and be suitable for the task being undertaken.

The project lifting plan must specify the correct lifting equipment to be used for each task. No other equipment than that specified can be used to undertake the lifting activity. If equipment that is not identified in the lifting plan is requested for use, the lift plan must be updated and reapproved.

29.6 General Crane Requirements

Cranes must be structurally sound and fitted with appropriate safety devices. Other general crane requirements are given as:

- Prior to the erection of any crane, air traffic control authorities, both civil and military must be consulted.
- Before operating a crane, operators must ensure the crane test and maintenance certificates are current.
- Where there are two or more cranes on a site erected in positions where they could collide or oversail or where the crane jib could slew into a restricted zone a SIL 2 type anti-collision prevention system must be used. This system must only be used as a backup to vigilant crane drivers/banksmen with crash radios, who must be the first line of defence together with well-coordinated and well-managed lifts.
- The systems must be regularly checked to ensure that the zoning and anti-clash functions are operating correctly and that 'creep' of zones etc. has not taken place.
- All projects with tower cranes are required to maintain an agreed zoning and anti-collision drawing clearly showing the zoning boundary, crane radii (including out-of-service), clash zones and a designated zoning test point for each crane. The drawing shall be included in the project lift plans and a copy displayed within the cab of each crane.
- Lockable hoardings at least 2.4 m high must be erected around the base of every tower crane mast, hoardings must be higher where adjacent structures or materials could assist in climbing. Locks should be key code type or equivalent to give due consideration of rescue of the crane driver should the rescue team be required to access the crane in an emergency.
- Fixed lockable trapdoor must be installed across operator access ladder.
- Anti-climb mesh screens must be fixed to the outside faces of the crane mast at trapdoor level.
- Anti-climb screens and trapdoor are fitted above the highest access point (including above ties into structure).
- All crane cabs will have a suitable fire extinguisher.
- Working hours for crane drivers shall be controlled to minimise the risk of errors caused by fatigue. As a guide, single tower cranes will have two drivers, two tower cranes will have three drivers, three tower cranes will have five drivers.
- The manufacturer's manual supplied with the crane normally provides details of the regular inspection requirements and must be strictly followed. A visual inspection of the entire machine must be made before the crane is put to work.
- The crane must be put through all motions by the driver and any defects must be reported immediately. All brakes and clutches must be checked for correct operation.
- A competent person must be appointed to carry out a weekly inspection which must be recorded. The inspection must include the crane structure and mechanical components together with any structural ties, track, etc. and the correct functioning of the safe load indicator.
- The crane logbook must be completed by the operator to detail any faults or issues with the crane and record their use.
- Sufficient clear space for the length of the jib involved must always be provided to prevent overlapping of jibs from other cranes on the site.
- Proximity of other structures and contractors' works must be considered. Common access areas and routes must always be checked by the Expo 2020 Dubai central logistics team.
- Pre-operational checks that are carried out include the following:
 - Crane is free of visual defects
 - Controls are in good condition and operational with legible markings
 - Ropes are not damaged and hooks are in good condition
 - Runways are clear of obstacles
 - Safety switches and interlocks are operational
 - Warning signs are in good condition
 - Lifting gear has current certification and shows no signs of damage
 - All brakes, stops, and motion limits including zoning (where applicable) are checked before any load is lifted.
- If any lifting gear or accessories are out of certification or showing signs of damage, they must be withdrawn from service.
- No person must operate or allow the operation of a crane that is either faulty or out of certification.
- Crane operators must not exceed the crane capacity and must immediately cease operations if the automatic warning devices activate.
- Grillages (crane mats) must be used on mobile crane outriggers to spread the load.
- All mobile cranes must extend outriggers before commencing lifting operations. All crane warning devices or lights must be in full working condition prior to commencing lifting operations.
- A permit-to-work system is required for the use of mobile cranes managed by the contractor or Supervision consultant. Further lifting permits may be required as documented within each organisations own arrangements.
- Cranes must have the ability to isolate the controls when the crane is not in use, the crane cab is still powered (e.g. air conditioning is on) and the operator is within the cab in order to prevent accidental use of controls.

To ensure no slippage occurs, recheck the brakes after the lifting load is just clear of the ground or the landing.

CREATED AND ORGANISED BY

INTERNATIONAL
CRANES
AND SPECIALIZED TRANSPORT

khl



Thank You

Q&A